rewritten paragraph.

Oligonucleotides (probes). Synthetic double-stranded oligonucleotides are end-labeled with [α_{32}P]ATP using the Klenow fragment of DNA polymerase. The sequences of oligonucleotides A3/A4 which is an example for PDX-1 binding site (one of them) on the insulin promoter 5'GATCTGCC CCTTGTTAATAATCTAATG 3'(SEQ ID NO: 24). The sequence for A1 (additional PDX-1 binding site on insulin promoter) is 5' GATCCGCCCTTAATGGGCCAAACGGCA-3' (SEQ ID NO: 25). The labeled oligos are used as probes for electromobility shift assays, as described in FIG 7. The identity of PDX-1 is double estimated by supershift using a specific antibody which prevents the PDX-1 binding to its cognate locus on the promoter, or that increases the molecular weight of the complex separated on PAGE (antibody+pdx-1+probe) compared to that which includes only pdx-1+labeled probe (last two lanes in FIG 7).

C10

In the Claims:

Please cancel claims 2, 9, 16-17, 24, 26-28 and 32 without prejudice or disclaimer.

Please add new claims 33-42.

Replace the pending claims with the following:

1. (Amended) A method of inducing pancreatic hormone expression in the liver of a mammal, wherein said pancreatic hormone is selected from the group consisting of insulin, somatostatin, and glucagon, said method comprising administering to a mammal an adenovirus vector comprising a cytomegalovirus (CMV) promoter operably linked to a nucleic acid encoding a pancreatic and duodenal homobox 1 (PDX-1) polypeptide in an amount sufficient to induce said pancreatic hormone expression in said liver in said mammal.

C11

C12 10. (Amended) The method of claim 1, wherein administering said vector increases hepatic insulin levels in said mammal.

11. (Amended) The method of claim 1, wherein administering said vector increases serum insulin levels in said mammal.

C12 12. (Amended) The method of claim 1, wherein the mammal is a rodent or human.

13. (Amended) The method of claim 1, wherein the mammal is further administered a transfection agent.

C13 15. (Amended) The method of claim 1, wherein the administering is by a route selected from the group consisting of intraperitoneal, subcutaneous, nasal, intravenous, oral and transdermal delivery.

C14 29. (Amended) A method of inducing a pancreatic islet gene expression profile in a liver cell of a subject, said method comprising administering to a subject an adenovirus vector comprising a cytomegalovirus (CMV) promoter operably linked to a nucleic acid encoding a pancreatic and duodenal homobox 1 (PDX-1) polypeptide in an amount sufficient to induce said pancreatic islet gene expression in said liver cell in said subject.

30. The method of claim 29, wherein said pancreatic islet gene is insulin.

C15 31. (Amended) A composition comprising in an amount effective to induce pancreatic hormone expression in a liver cell a nucleic acid encoding a pancreatic and duodenal homobox 1 (PDX-1) polypeptide, and a carrier.

33. (New) A method of inducing insulin expression in the liver of a mammal, said method comprising administering to a mammal an adenovirus vector comprising a cytomegalovirus (CMV) promoter operably linked to a nucleic acid encoding a pancreatic and duodenal homobox 1 (PDX-1) polypeptide in an amount sufficient to induce said insulin expression in said liver of said mammal.

C16 34. (New) A method of inducing glucagon expression in the liver of a mammal, said method comprising administering to a mammal an adenovirus vector comprising a cytomegalovirus (CMV) promoter operably linked to a nucleic acid encoding a pancreatic and duodenal homobox 1 (PDX-1) polypeptide in an amount sufficient to induce said glucagon expression in said liver of said mammal.

35. (New) A method of inducing somatostatin expression in the liver of a mammal, said method comprising administering to a mammal an adenovirus vector comprising a cytomegalovirus (CMV) promoter operably linked to a nucleic acid encoding a pancreatic and duodenal homobox 1 (PDX-1) polypeptide in an amount sufficient to induce said somatostatin expression in said liver of said mammal.

36. (New) A method of inducing prohormone convertase 1/3 (PC 1/3) expression in the liver of a mammal, said method comprising administering to a mammal an adenovirus vector comprising a cytomegalovirus (CMV) promoter operably linked to a nucleic acid encoding a pancreatic and duodenal homobox 1 (PDX-1) polypeptide in an amount sufficient to induce said PC 1/3expression in said liver of said mammal.

37. (New) A method of inducing pancreatic hormone expression in a liver cell, wherein said pancreatic hormone is selected from the group consisting of insulin, somatostatin, and glucagon, said method comprising contacting said cell with an adenovirus vector comprising a cytomegalovirus (CMV) promoter operably linked to a nucleic acid encoding a pancreatic and duodenal homobox 1 (PDX-1) polypeptide, thereby inducing said pancreatic hormone expression in said liver cell.

C16 Cont

38. (New) A method of inducing insulin expression in a liver cell, said method comprising contacting said cell with an adenovirus vector comprising a cytomegalovirus (CMV) promoter operably linked to a nucleic acid encoding a pancreatic and duodenal homobox 1 (PDX-1) polypeptide, thereby inducing said insulin expression in said liver cell.

39. (New) A method of inducing somatostatin expression in a liver cell, said method comprising contacting said cell with an adenovirus vector comprising a cytomegalovirus (CMV) promoter operably linked to a nucleic acid encoding a pancreatic and duodenal homobox 1 (PDX-1) polypeptide, thereby inducing said somatostatin expression in said liver cell.

40. (New) A method of inducing glucagon expression in a liver cell, said method comprising contacting said cell with an adenovirus vector comprising a cytomegalovirus (CMV)

promoter operably linked to a nucleic acid encoding a pancreatic and duodenal homobox 1 (PDX-1) polypeptide, thereby inducing said glucagon expression in said liver cell.

41. (New) A method of inducing prohormone convertase 1/3 (PC 1/3) expression in a liver cell, said method comprising contacting said cell with an adenovirus vector comprising a cytomegalovirus (CMV) promoter operably linked to a nucleic acid encoding a pancreatic and duodenal homobox 1 (PDX-1) polypeptide, thereby inducing said PC 1/3 expression in said liver cell.

C 16 Cancel

42. (New) A composition comprising an adenovirus vector comprising a cytomegalovirus (CMV) promoter operably linked to a nucleic acid encoding a pancreatic and duodenal homobox 1 (PDX-1) polypeptide, and a carrier.